UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,771	08/29/2000	Norbert W. Quast	DB000852-000	2847

24122 7590 04/08/2004	EXAMINER	
THORP REED & ARMSTRONG, LLP	HOANG, PHUONG N	
ONE OXFORD CENTRE		
301 GRANT STREET, 14TH FLOOR	ART UNIT	PAPER NUMBER
PITTSBURGH, PA 15219-1425	2126	

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 January 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 16 are pending for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   **Claims 1, 3 – 6, and 8 - 9 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Purtilo "Improving Module reuse by interface adaptation" p.

208 – 217, in view of Toutonghi, US patent no. 6,438,744.

2.   Purtilo was cited in the last office action.

3.   **As to claim 1,** Purtilo teaches a program flow method in a program component

system, comprising a running time system (system can create an execution-time

module, p. 208 col. 2 paragraph 1) and several components (components, p. 210 col. 2

paragraph 3), each having one program portion, the method comprising the steps of:

a)   data acquisition (calling module, p. 210 paragraph 4) by means of the running time system (runtime, page 208, col. 1 last paragraph), of data of a second component into the first component.

b)   data disposal (called module, p. 210 paragraph 1), by means of the running time system, of data of the first component into the second component.

Purtilo teaches first and second components programmer-defined interfaces.

However, Purtilo does not explicitly teach first and second components independent of programmer-defined interfaces.

Toutonghi teaches components independent of programmer-defined interfaces (dynamic mapping of component interfaces, col. 7 lines 62 – col. 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Purtilo and Toutonghi's because Toutonghi's dynamically defining interfaces would provide the flexibility of calling and called functions or components without pre-defined interfaces.

4.   **As to claim 3 and 4,** it would have been obvious for one of ordinary skill in the art to recognize that data acquisition and/or data disposal is carried out without the cooperation of the second component when the new interface is not needed.

5.   **As to claim 5,** Toutonghi teaches the step of data is kept in a region (col. 5 lines 35 – 60).

6.   **As to claims 6 and 8,** Purito teaches the steps of directly access data region

local and /or non-persistent data (page 209, col. 2 last paragraph).

7.   **As to claim 9,** Purtilo teaches docking point (annotated actual parameter list is

provided, p. 210 col. 2 paragraph 5).

8.   **Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable**

over Purtilo "Improving Module resue by interface adaptation" p. 208 – 217, in

view of Toutonghi, US patent no. 6,438,744, and further in view of Craze US patent

no. 5,809,564.

9.   Purtilo and Craze were cited in the last office action.

10.   **As to claim 2,** Purtilo and Toutonghi do not teach the steps of the data

transmitted during the data acquisition are transferred from a memory image portion of

the second component into a transfer data region of the first component.

Craze teaches the data transmitted during the data acquisition are transferred

from a memory image portion (the return address identifies the location in the

application heap where the CPU should continue processing when the called function

returns to the calling function, col. 4 lines 1 – 20) of the second component into a

transfer data region of the first component.

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine the teachings of Purtilo, Toutonghi, and Craze's

because Craze's transferring data between heap in the stack without moving data out of

the region would speeds up the process.

11.   **As to claim 7,** Craze teaches a waiting list (stack, col. 4 lines 1 – 15).

12.   **Claims 10 - 13 are rejected under 35 U.S.C. 103(a) as being unpatentable
over Purtilo "Improving Module reuse by interface adaptation" p. 208 – 217.**

13.   Purtilo was cited in the last office action.

14.   **As to claim 10,** Purtilo teaches the steps of:

        a)   docking points (annotated actual parameter list is provided, p. 210 col. 2

paragraph 5) corresponding to an inheritance parameter;

        b)   modifying the components where at least one docking point was found by

entering call information (the annotated actual parameter list is provided so that the

programmer can pick and choose, p. 210 col. 1 section 2.1 and col. 2 paragraph 5) at

each docking point found; wherein the expansion of the program component system is

completed without any expansion interface of the several component being defined by a

programmer (the program component is expanded due to entering call information, this

does not need to expand the interface).

Puritlo does not explicitly teach inheritance parameter determined by a definition

of the further component.

However, Purtilo teaches the annotated parameter list having components

describing the number, order, and type of argument (page. 10 section 2.1).

It would have been obvious one of ordinary skill in the art at the time the

invention was made to recognize that the components describing in the annotated

parameter list to be further component because the user can manipulate data via further

components of the parameter list.

15.   **As to claim 11,** Purtilo teaches all interaction interfaces (actual interface pattern,

p. 210 col. 2 paragraph 5).

16.   **As to claim 12,** Purtio teaches the steps of data fields are predefined as

potential docking points (parameter list are predefined as can be annotated, p. 210 col.

2 paragraph 5).

17.   **As to claim 13,** Purtilo teaches entering said call information into the docking

point (the annotated actual parameter is used for entering information, p. 210 col. 2

paragraph 5).

18.   Claims 14 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Purtilo "Improving Module resue by interface adaptation" p. 208 – 217, in view of Dievendorff US patent no. 6,425,017.

19.   Purtilo and Dievendorff were cited in the last office action.

20.   **As to claim 14,** Purtilo does not teach the step of generating at lease one binary object from the definition of the further component.

Dievendorff teaches generating at lease one binary object (binary standards for objects, col. 9 lines 55 – 65) from the definition of the further component.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Purtilo and Dievendorff's because Dievendorff's binary object would be easy to be maintained.

21.   **As to claim 15,** it is the design of the system to have the maximum of one binary· object for each docking point.

22.   **As to claim 16,** one of the ordinary skill in the art would recognize that every component needs memory allocation for accessing to it.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong N. Hoang whose telephone number is (703) 605-4239. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703)305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ph
March 22, 2004

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